

ABSTRACT

A method and system for providing broadband Internet access, possibly on a wholesale basis. High-bandwidth Internet traffic over an Internet backbone is channelized onto input/output ports of a routing device. The routing device contains multiple, individual, full-function routers, each capable of routing at least some portion of the high-bandwidth Internet traffic. The channels and/or ports are grouped to define a network interface, and traffic over the network interface is assigned to one of the individual routers for processing. Routing and forwarding information is stored on a plurality of line cards, which forward the Internet traffic at line speed once routing instantiations are performed by the routers. A network interface and router(s) can be assigned to a customer, either for the customer to use or to provide to a secondary user. Customer access can be altered as needed, simply by reassigning, adding or removing the router(s) and/or line card(s). Each of the routers are logically and physically independent of one another, to provide reliability and flexibility in routing the Internet traffic. In one embodiment, all of the routers and associated ports and line cards are contained within a single chassis.

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